

ASSIGNMENT 2

Textbook Assignment: Chapter 2 - Roof Framing

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- 2-1. Which of the following types of roof is most commonly used in the Navy?
1. Shed
 2. Hip
 3. Gable
 4. Intersecting
- 2-2. Which of the following types of roof is considered strongest?
1. Shed
 2. Hip
 3. Gable
 4. Intersecting
- 2-3. A roof having only one slope is considered what type?
1. Shed
 2. Hip
 3. Gable
 4. Intersecting
- 2-4. In roof construction, the ratio of unit of rise to unit of span is known by what term?
1. Total run
 2. Line length
 3. Total rise
 4. Pitch
- 2-5. In roof construction, the hypotenuse of a triangle whose base equals the total run and whose altitude equals the total rise is known by what term?
1. Total run
 2. Line length
 3. Total rise
 4. Span
- 2-6. What members make up the main body of a roof framework?
1. Double top plates
 2. Joists
 3. Ceiling framework
 4. Rafters
- 2-7. Rafters are a functional part of both walls and roof.
1. True
 2. False
- 2-8. What type of rafter does not extend the full distance from the plate to the ridgeboard?
1. Jack
 2. Valley
 3. Hip
 4. Common
- 2-9. What type of jack is nailed between hip and valley rafters?
1. Valley
 2. Cripple
 3. Hip
 4. Eave
- 2-10. Which of the following terms describe(s) that portion of a rafter extending beyond the outer edge of the plate?
1. Eave only
 2. Tail only
 3. Overhang only
 4. All of the above
- 2-11. When the blade of a framing square is 24 inches long, the tongue usually varies within which of the following overall lengths?
1. 12 to 16 in.
 2. 16 to 24 in.
 3. 14 to 18 in.
 4. 18 to 24 in.

- 2-12. The hypotenuse is the longest side of a right triangle.
1. True
 2. False
- 2-13. Which of the following framing square scales is NOT used in roof framing?
1. Octagon
 2. Hundredths
 3. Tenths
 4. Twelfths
- 2-14. On a framing square, the longest lines on the hundredths scale indicate how many hundredths of an inch?
1. 5
 2. 10
 3. 25
 4. 50
- 2-15. On a framing square, where is the octagon scale located?
1. Back side of the tongue
 2. Down the face of the tongue
 3. Down the face of the blade
 4. Down the middle of the back side of the blade
- 2-16. To use the octagon scale on a framing square, you set one leg of the divider on the first dot of the scale, and the other leg of the divider/dividers on the dot whose number corresponds to what dimension of the piece to be cut?
1. Width in inches divided by eight
 2. Width in inches divided by four
 3. One-half the length of the center line
 4. Width in inches
- 2-17. How many tables does a framing square have?
1. One
 2. Two
 3. Three
 4. Four
- 2-18. Which of the following framing square features is primarily used for estimating board feet?
1. Brace table
 2. Essex-board table
 3. Rafter table
 4. Octagon scale
- 2-19. On a framing square, where is the brace table located?
1. Back of the blade
 2. Face of the blade
 3. Face of the tongue
 4. Back of the tongue
- 2-20. A gable roof slopes in how many directions?
1. One
 2. Two
 3. Three
 4. Four
- 2-21. The run of an overhang should be measured between what two points?
1. From the top plate to the bottom of the ridgeboard
 2. From the building line to the plumb line of the ridgeboard
 3. From the building line to the tail cut on the rafter
 4. From the ridgeboard to the tail cut on the rafter
- 2-22. A bird's-mouth is formed by what two cuts?
1. Tail and heel
 2. Ridge and tail
 3. Seat and ridge
 4. Heel and seat
- 2-23. The length of a rafter from the heel plumb line to the shortened plumb line is known as what type?
1. Actual
 2. Theoretical
 3. Line
 4. Common

- 2-24. What angle should a hip rafter form with the building line?
1. 90°
 2. 60°
 3. 45°
 4. 30°
- 2-25. The unit of rise is always the same for hip and common rafters, but the unit of run for a hip rafter is different.
1. True
 2. False
- 2-26. With a hip rafter framed against a common rafter, the shortening allowance should be what dimension?
1. One-half of the 45° thickness of the ridge
 2. One-fourth of the 45° thickness of a common rafter
 3. One-half of the 45° thickness of a common rafter
 4. One-half of the thickness of the ridge
- 2-27. What feature is required when a hip rafter joins the ridge or the ridge ends at other than 90°?
1. Bird's mouth
 2. Angle cut
 3. Tail cut
 4. Side cut
- 2-28. What procedure should you use on a hip rafter to keep it level with a common rafter?
1. Plane the top of the hip rafter
 2. Bevel the top edges only
 3. Deepen the bird's-mouth only
 4. Either 2 or 3 above
- 2-29. On an intersecting roof, the area where two or more sloped roof sections intersect is known by what term?
1. Valley
 2. Ridge
 3. Hip
 4. Gable
- 2-30. Which of the following features can run from valley rafters to both ridges?
1. Hip jack
 2. Valley jack
 3. Supporting valley
 4. Common rafter
- 2-31. Which of the following features can run at a 45° angle to the exterior walls
1. Valley rafter
 2. Hip jack
 3. Supporting valley
 4. Hip
- 2-32. Which of the following techniques should be used in constructing an intersecting roof that has one long and one short valley rafter?
1. Frame both valley rafters up against the main ridge
 2. Frame both valley rafters against the intersecting ridge
 3. Frame the long valley rafter up against the intersecting ridge and the short rafter up against the main ridge
 4. Frame the long valley rafter up against the main ridge and the short valley rafter up against the long valley rafter
- 2-33. What is the shortening allowance of a valley rafter when a dormer without sidewalls is framed between double headers with a combined actual thickness of 3 1/4 inches?
1. One-half of the 45° thickness of the inside upper double header only
 2. One-half of the 45° thickness of the common rafter only
 3. Both 1 and 2 above
 4. One-half of the total thickness of the upper and lower double headers

- 2-34. In an equal-pitch framing situation, the unit of rise of a jack rafter is always the same as the unit of rise of a common rafter?
1. True
 2. False
- 2-35. Which of the following jack rafter types extends from a hip rafter to a valley rafter?
1. Valley
 2. Cripple
 3. Valley cripple
 4. Hip-valley cripple
- 2-36. When erecting a gable roof, what components are constructed first?
1. Cripple and jack rafters
 2. Gable-end rafters and the ridge
 3. Hip rafters
 4. Valley rafters
- 2-37. How long should the temporary bracing used in roof erection be left in place?
1. Until sufficient sheathing has been installed to hold the rafters in place
 2. Until the wind has died down
 3. 3 days
 4. 4 days
- 2-38. Which of the following features is used to support loads over a long span without intermediate support or supports?
1. Dormer
 2. Valley rafter
 3. Roof truss
 4. Common rafter
- 2-39. When building with trusses, double top plates and double floor joists are required.
1. True
 2. False
- 2-40. Which of the following truss components acts as a ceiling joist?
1. Gusset
 2. Top cord
 3. Bottom cord
 4. Web
- 2-41. Which of the following structural components is eliminated because trusses are self-supporting?
1. Interior bearing partitions
 2. Gussets
 3. Double top plates
 4. Floor joists
- 2-42. In frame construction, what truss type(s) is/are most commonly used?
1. King post only
 2. W-type only
 3. Scissors and W-types only
 4. All of the above
- 2-43. Which of the following trusses consists of top and bottom chords tied together with web members?
1. W-type only
 2. Fink only
 3. W-type and Fink
 4. Scissors
- 2-44. The load carried by a roof truss is directly transferred to what other structural component(s)?
1. Floor
 2. Foundation
 3. Outside walls
 4. Interior walls
- 2-45. Which of the following item is/are not consideration(s) in truss design?
1. Materials
 2. Snow and wind loads
 3. Weight of roof itself
 4. Slope of roof

- 2-46. Each part of a truss is in a state of compression or tension. Which of the following states, if any, describe(s) the pushing-together force?
1. State of tension only
 2. State of compression only
 3. All of the above
 4. None of the above
- 2-47. In what positions should trusses be (a) handled and (b) stored?
1. (a) Horizontal (b) horizontal
 2. (a) Horizontal (b) vertical
 3. (a) Vertical (b) horizontal
 4. (a) Vertical (b) vertical
- 2-48. Which of the following features is/are necessary to resist wind uplift force?
1. Temporary bracing
 2. Gussets
 3. Trusses anchored to outside walls
 4. Blocking at lower chords
- 2-49. Toenailing is the most satisfactory method of securing a truss to an outside wall?
1. True
 2. False
- 2-50. A partition can be nailed directly to the lower chord under which of the following conditions, if any?
1. A partition runs at right angles to the bottom of the truss chord
 2. Partitions are erected after ceiling finish is applied
 3. A partition runs parallel with the bottom chord
 4. None of the above
- 2-51. Which of the following scales on a framing square is graduated in inches and provides various shortcuts in problem solving?
1. Tenths
 2. Twelfths
 3. Hundredths
 4. Octagon
- 2-52. In a gable roof, why is a ridgeboard placed at the peak of the roof?
1. Provide a nailing surface for the top ends of the common rafter
 2. Provide a nailing surface for one end of the common rafter
 3. Provide a starting point for the peak of the roof
 4. Provide the starting point for roof sheathing
- 2-53. All common rafters for a gable roof are the same length.
1. True
 2. False
- 2-54. Which of the following terms is another name for the notch formed by the seat and heel cut?
1. Overhang
 2. Projection
 3. Bird's mouth
- 2-55. When installing a roof where the ridgeboard is longer than one piece, where should the break between the boards occur?
1. Between the rafters
 2. Center of a rafter
 3. At the end of a rafter
- 2-56. When working with gable or double-pitch roofs which of the following is/are normally considered for additional horizontal reinforcement?
1. Ceiling joists
 2. Gable studs
 3. Collar ties
 4. Ridgeboard
- 2-57. When framing a roof, the scaffold should be set no lower than what distance below the level of the main-roof ridge?
1. 1 ft
 2. 2 ft
 3. 3 ft
 4. 4 ft

2-58. Which of the following structural members connects the joints on roof trusses?

1. Gussets
2. Templates
3. Collar ties
4. Truss ties

2-59. When working with roof trusses, double top and bottom plates on interior partitions can be eliminated.

1. True
2. False

2-60. What is the estimated material savings when using roof trusses?

1. 10%
2. 20%
3. 30%
4. 40%

2-61. Which of the following basic components of a roof truss also acts as a ceiling joist?

1. Top chord
2. Bottom chord
3. Web members